



Australian Government

MSTGN2012 Work safely with chemicals in TCF operations

Release: 1

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Modification History

Release 1. Supersedes:

- LMTHL2004A Prepare chemicals to a formula
- LMTLA2001A Conduct safe handling of laundry chemicals
- LMTTX2015B Handle and prepare chemicals, dyes and other substances used in textile production

Not equivalent

Application

This unit of competency covers the skills and knowledge required to handle and work with chemical substances and preparations that are used in sectors of the textile, clothing and footwear (TCF) industry. It includes cleaning chemicals and solvents commonly used in laundry operations and chemicals, dyes and other substances that are used in textile production.

This unit of competency is applicable to all sectors of the TCF industry.

It applies to operators who prepare, use and store chemicals for TCF operations. While the unit of competency relates to safe practices pertaining to all chemical handling, and use of a range of chemical substances, the application of the unit and the evidence requirements may focus on one or more industry sectors or workplace contexts.

Work may be conducted in small to large scale enterprises and may involve individual and team activities. Work is performed within defined procedures under direct supervision.

Licensing, legislative or certification requirements to work safely with chemicals may apply in some contexts.

Pre-requisite Unit

Nil

Competency Field

Generic

Unit Sector

Not applicable

Elements and Performance Criteria

Elements describe the Performance criteria describe the performance needed to

essential outcomes.	demonstrate achievement of the element.
1	Determine job requirements
1.1	Follow standard operating procedures (SOPs)
1.2	Comply with work health and safety (WHS) requirements at all times
1.3	Use appropriate personal protective equipment (PPE) in accordance with SOPs
1.4	Identify job requirements from specifications, drawings, job sheets or work instructions
2	Prepare to use chemicals in TCF operations
2.1	Access information on chemicals and substances used in TCF enterprises
2.2	Distinguish types of chemicals and preparations that require safe handling in own workplace
2.3	Identify personal responsibilities in working with chemicals
2.4	Interpret common terminology in safety data sheets (SDS) for chemicals used in cleaning, textile production or other application, according to workplace requirements
2.5	Identify procedures for using chemicals in a cost-effective manner
3	Identify chemical control measures
3.1	Identify location and storage conditions for substances and associated documentation
3.2	Differentiate between a range of laundry and other chemicals, and identify risks associated with preparing and using chemicals
3.3	Identify risk control measures and special handling procedures for substances
3.4	Implement correct procedures for calculating quantities and measuring chemicals
3.5	Identify hazards associated with the handling and uses of substances used in the workplace, and the emergency procedures required

		3.6	Identify local procedures to document procedures and respond to environmental considerations
4	Apply safe handling of chemicals and solvents	4.1	Ventilate work area and eliminate ignition sources
		4.2	Measure, handle and store according to WHS practices and workplace procedures
		4.3	Safely operate machinery and equipment associated with use of chemicals and solvents
		4.4	Demonstrate procedures to act upon accidents and emergencies according to procedures required for the chemical concerned
		4.5	Use PPE according to regulations
5	Promote safe handling of chemicals	5.1	Maintain work area and dispose of chemicals according to regulatory requirements, environmental considerations and SDS recommendations
		5.2	Communicate handling and storage information within workplace
		5.3	Complete required documentation
		5.4	Clear spillages according to workplace procedures and complete housekeeping requirements
		5.5	Report WHS issues, faults or emergencies to relevant personnel

Foundation Skills

This section describes those required skills (language, literacy and numeracy) that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance.

Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Workplace procedures include one or more of the following:

- requirements prescribed by legislation, awards, agreements and conditions of employment
- SOPs
- work instructions
- PPE
- oral, written and visual communication
- quality practices, including responsibility for maintenance of own work quality and contribution to quality improvement of team or section output
- housekeeping
- tasks related to environmental protection, waste disposal, pollution control and recycling
- WHS procedures

Australian Standards include:

- the relevant industry or Australian Standards that are current at the time this unit is being undertaken

Access information on chemicals and substances includes, but is not limited to, one or more of the following:

- identifying relevant regulations and codes of practice relating to the control of hazardous substances
- assessing workplace information and workplace procedures regarding the safe handling of chemicals used in job role in industry sector
- identifying chemicals and their characteristics
- differentiating between toxic agents, corrosives, reactives, and flammables and combustibles
- identifying workplace procedures for accessing stored substances and their housekeeping requirements
- locating relevant SDS for hazardous substances
- recognising and responding to signage and labelling

Risks and hazards include, but are not limited to, one or more of the following:

- exposure to chemicals, other harmful substances, machinery and equipment including:
- load shifting equipment, such as overhead cranes and forklifts
- production machinery and equipment

- inflammable materials and fire hazards
- manual handling of materials and equipment
- waste management and disposal
- extremes in weather conditions
- variations in lighting levels
- a range of floor surfaces
- water hazards
- accidents
- traffic flow, vehicle and equipment operation
- a range of storage areas
- health risks arising from exposure to chemicals

Common terminology in safety data sheets (SDS) includes, but is not limited to, five or more of the following:

- acute effect
- acute toxicity
- asphyxiant
- ceiling
- carcinogen
- chronic effect
- chronic toxicity
- combustible material
- corrosive
- decomposition
- dermal
- flash point
- flammable material
- ignition sources
- ingestion
- irritant
- mutagen
- oxidizer
- pH
- reactivity
- sensitizer
- solubility
- short-term exposure limit (STEL)
- teratogen
- threshold limit value (TLV)
- toxicity
- toxic substance
- time weighted average (TWA)

Work environment includes, but is not limited to, one or more of the following:

- operational workplace activities
- restricted space
- hazardous, controlled or exposed conditions
- day or night conditions

Unit Mapping Information

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Not equivalent

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a203ec5c-de7d-406b-b3e1-8f1a9b76e92e>

Assessment Requirements for MSTGN2012 Work safely with chemicals in TCF operations

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria and include:

- reading and following work instructions, standard operating procedures (SOPs), safe work practices
- identifying personal responsibilities in working with chemicals
- applying relevant Australian Standards to comply with job role and workplace requirements
- applying *AS/NZS 4146:2000 Laundry practice* (applicable to a laundry workplace)
- distinguishing types of chemicals and preparations that require safe handling in own workplace
- identifying risks and hazards, risks and using appropriate control measures
- differentiating between toxic agents, corrosives, reactives, and flammables and combustibles
- locating and interpreting safety data sheets (SDS) and other available safety information on identified chemicals
- identifying and applying procedures for responding to accidents and incidents
- using personal protective equipment (PPE)
- measuring, handling, transferring, storing and disposing of chemicals safely and with respect to environmental considerations
- communicating and recording accurate information.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- safe work practices and procedures and use of PPE
- Australian Standards, industry regulations and codes of practice that govern the control of chemicals in the identified workplace
- *AS/NZS 4146:2000 Laundry practice* (applicable to a laundry workplace)

- characteristics of different chemicals and solvents, toxic agents, corrosives, reactives, and flammables and combustibles, relevant to sector and workplace, such as:
 - perchlorethylene
 - white spirit
 - hydrocarbon
 - liquid silicon
 - detergent
 - chlorine bleach
 - oxybleach
 - builder
 - starch
 - fabric conditioner
 - laundry sour
 - caustic alkali
- characteristics of preparations used in textile production, such as:
 - dyes
 - chemicals
 - cleaning agents
 - solvents
 - substances used in the preparation of yarns or textile products for production processes
 - other liquid or particle additives used in textile production
- workplace information, such as:
 - SDS for hazardous substances
 - the meaning of common SDS terms
 - workplace procedures
 - signage and labelling
 - verbal instruction
- personal responsibilities in the control of chemicals in the workplace
- risks and hazard, such as:
 - mixing of chemicals
 - spills and leaks in the workplace
 - chemical fires
 - exposure to perchlorethylene, dyes or other cleaning chemicals via absorption, inhalation or ingestion
 - exposure to chemicals, other harmful substances, machinery and equipment including:
 - load shifting equipment, such as overhead cranes and forklifts
 - production machinery and equipment
 - inflammable materials and fire hazards
 - manual handling of materials and equipment
 - waste management and disposal

- extremes in weather conditions
- variations in lighting levels
- a range of floor surfaces
- water hazards
- accidents
- traffic flow, vehicle and equipment operation
- a range of storage areas
- storage conditions, such as:
 - temperature
 - security
 - labelling
 - organisation
 - containers used
- PPE relevant to workplace and job role:
 - goggles or face shields
 - respirators
 - air-supplied or self-contained helmets
 - safety boots, gloves and appropriate clothes/garments
 - risks associated with operating machinery or equipment that use chemicals
 - risk and hazard control measures, such as:
 - isolation procedures
 - guards and safety devices
 - traffic and pedestrian flow regulation
 - inspections
 - housekeeping
 - communication protocols
- procedures for the safe and cost-effective measuring and mixing of chemicals and other agents
- personal responsibilities, such as:
 - following WHS procedures
 - following workplace procedures
 - following environmental procedures
 - reporting incidents
 - using PPE
- common SDS terminology used in sector application
- workplace procedures for reporting emergencies or WHS issues, control of chemical spills and fires, hazard identification and control measures
- reporting and documentation requirements.

Assessment Conditions

- Assessors must:
 - satisfy the assessor competency requirements that are in place at the time of the assessment, as set by the VET regulator
 - have vocational competency in working safely with chemicals in TCF operations, at least to the level being assessed, with relevant industry knowledge and experience.
- Assessment should occur in operational workplace situations. Where this is not possible, or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment reflecting realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.
- The unit is applicable to all TCF sectors and assessment must ensure it is delivered to suit the industry it is being applied to.

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